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Subject: Influence of the reduced B-field on the track reconstruction

Posted by [donghee](#) on Fri, 21 Mar 2014 23:50:47 GMT

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Hi Stefano,

I try to see the effect of reduced B-field, which was intensively discussed during this week. Two plots are produced to compare the momentum resolution with two different field map configurations for "FULL" and "HALF".

Simulation has been made with single Muon particle with momentum range starting from 0.3 GeV upto 2 GeV, and scan theta between 10 and 148 degree.

PANDARoot Jan14 has been used and simulation codes are attached to cross check.

The pull distributions of momentum for  $p=0.3$  GeV and both Half and Full field map configurations cases are also attached to make sure the fit procedure. (Gauss+Pol(3) has been used.)

The momentum resolution with half field map is factor 2 times worser than FULL field map. If you want to check the analysis code, please let me know, I will send you.

Best wishes,  
Donghee

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#### File Attachments

- 1) [run\\_pid\\_dig.C](#), downloaded 264 times
  - 2) [run\\_pid\\_pid.C](#), downloaded 268 times
  - 3) [run\\_pid\\_rec.C](#), downloaded 267 times
  - 4) [run\\_pid\\_sim.C](#), downloaded 240 times
  - 5) [resolution\\_B\\_half\\_03.pdf](#), downloaded 273 times
  - 6) [resolution\\_B\\_full\\_03.pdf](#), downloaded 247 times
  - 7) [summary\\_for\\_B\\_full.pdf](#), downloaded 263 times
  - 8) [summary\\_for\\_B\\_full.png](#), downloaded 473 times
  - 9) [summary\\_for\\_B\\_half.pdf](#), downloaded 258 times
  - 10) [summary\\_for\\_B\\_half.png](#), downloaded 399 times
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